

# PATENT ABSTRACTS OF JAPAN

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(71)Applicant : **FUJITSU KIDEN LTD**

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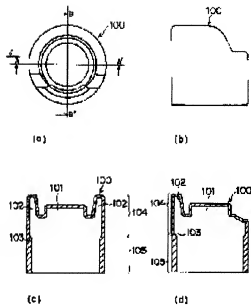
(72)Inventor : **SAKURAI MASANORI  
MORIKAWA HIDETOSHI**

## (54) SOUND INSULATING COVER OF SWITCH

(57)Abstract:

**PURPOSE:** To provide a sound insulating cover which insulates sound generated following operation of a switch and at the same time which can easily be employed for existing switches.

**CONSTITUTION:** A sound insulating cover 100 is broadly divided into a covering part 104 and an attaching part 105 and made of silicone rubber. In the covering part 104, recessed parts 101, 102 to be well matched with a button shape which is to be covered with the covering part are formed. Based on the elasticity of the attaching part 105, the sound insulating cover 100 is attached to a switch by matching a button to the shape of the covering part 104 and inserting the button in the covering part. Since the sound insulating cover 100 is attached to a switch based on the elasticity of the attaching part 105, the sound insulating cover 100 can be detached freely.



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## CLAIMS

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[Claim(s)]

[Claim 1]A sound hood of a switch characterized by comprising the following.

A covering section which is applied to a switch with which opening and closing of contact are performed by operation to a handler, and covers said handler with it at least.

A fitting part which attaches said covering section to said switch.

[Claim 2]A sound hood of the switch according to claim 1 being able to detach and attach said fitting part freely to said switch.

[Claim 3]Claim 1 which sticks said fitting part to said switch, or is characterized by sticking said covering section on said switch, or a sound hood of a switch given in two.

[Claim 4]Claims 1 and 2, wherein it forms said fitting part using an elastic member and said fitting part is attached to said switch using the elasticity, or a sound hood of a switch given in three.

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## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Industrial Application]This invention relates to the art which soundproofs the sound generated from a switch.

[0002]

[Description of the Prior Art]A switch inputs information by the switching condition of contact, and its change. Now, there are many kinds of switches dramatically and it is properly used according to a use, a service space, etc.

[0003]Contact of the switch usually serves as a mechanism which uses elastic members, such as a spring, and is made to weld by pressure to a terminal in order to maintain each state of opening and closing. For this reason, the sound of "KACHI" generates many of switches from contact with the operation to a handler.

[0004]Although the sound emitted from a switch is not loud and a problem is not usually produced by the sound generated from a switch, the following problems may arise by the operating environment of a switch, for example.

[0005]In recent years, the case of a switch where it is used as a means for conveying a purchaser's purchase intention in an auction system is increasing. For example, it is connected to the console for exclusive use assigned to auction people and this console, and this auction system consists of a display for indication etc. with which the selling price etc. of the tender machine assigned to each purchaser and an auction article are displayed.

[0006]In the auction business using such an auction system, each purchaser does the depression of the switch which was able to be formed in the tender machine, when you wish the purchase of the auction article in the selling price displayed on the display for indication. Auction people check the existence of the buyer in the selling price under operation switch by each of this purchaser, i.e., the present setting out, with the display for indication in which it was provided by the console.

On the other hand, a console is operated according to the number of buyers, and its existence, and the selling price newly set as the display for indication is displayed.

Auction business advances by raising a selling price one by one until auction people become final and conclusive a buyer.

[0007]Although it is necessary to make it the trend of a purchaser and other purchasers which knocked down the auction article not known in the auction business in such an auction system, When a sound occurs from a switch with operation, the trend of the purchaser who operated the switch by the sound generated from a switch will be known by the purchaser around it. To soundproof the sound generated from a switch was desired so that this problem might be avoided. To enable it to apply easily also to the existing switch (system) in this case is also desired.

[0008]As a switch for inputting a purchaser's bid intention, the button switch is widely adopted as the auction system (tender machine). When contact opens and closes this button switch and a hand is lifted from a button by operating a button by hand to those shaft orientations, it is what is called a push-button

switch that changes an auto return into the original state promptly.

[0009]In this invention, it was made in view of the above-mentioned problem.

Therefore, it aims at providing a sound hood easily applicable also to the existing switch, while soundproofing the sound generated with operation of a switch.

[0010]

[Means for Solving the Problem]This invention is characterized by a sound hood comprising the following.

A covering section which is applied to a switch with which opening and closing of contact are performed by operation to a handler, and covers a handler with it at least.

A fitting part which attaches a covering section to said switch.

[0011]In the above-mentioned composition, as for a fitting part, it is desirable that it can detach and attach freely to a switch, and a fitting part is stuck to a switch or it is desirable to stick a covering section on a switch. An elastic member is used for a fitting part and, as for a fitting part, being attached to a switch using the elasticity is desirable.

[0012]

[Function]A covering section covers handlers, such as a button, and the sound hood of this invention is attached to a switch by a fitting part in the state. For this reason, the sound which mainly leaks outside through a handler is suppressed (a soundproof effect acquired), and attachment of the sound hood to a switch becomes easy by a fitting part with \*\*. At this time, exchange of a sound hood, etc. become easy and the effect that convenience improves is acquired by enabling attachment and detachment of the attachment to the switch by a fitting part.

[0013]At this time, the sound which transmits and leaks air by sticking a sound hood with a switch can be suppressed, and a higher soundproof effect is acquired. If this fitting part is formed using an elastic member and a sound hood is attached to a switch with that elasticity, it will become possible to repeat attachment and detachment of a sound hood, and will become easy [ also sticking a sound hood on a switch ].

[0014]

[Example]Hereafter, the example by this invention is described in detail, referring to drawings. Drawing 1 is a figure showing the crime prevention covering 100 by this example.

Drawing 2 is an outline view showing the tender machine 200 of the auction system by which this sound hood 100 is applied.

[0015]In drawing 2, the figure (a) shows the top view of the tender machine 200, and the figure (b) shows respectively the side view from the row direction of the figure (a). With reference to this drawing 2, first, you make it connected with the auction business in the auction system by which this tender machine 200 is used, and the composition of the tender machine 200 with which this example is applied, and its operation are explained.

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**TECHNICAL FIELD**

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**EFFECT OF THE INVENTION**

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[Effect of the Invention]As mentioned above, the sound hood of this invention can soundproof the sound generated with operation of a switch by a fitting part in order to attach a covering section to a switch so that handlers, such as a button, may be covered, and can be made to apply it easily also to the existing switch, as explained.

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## TECHNICAL PROBLEM

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[0003]Contact of the switch usually serves as a mechanism which uses elastic members, such as a spring, and is made to weld by pressure to a terminal in order to maintain each state of opening and closing. For this reason, the sound of "KACHI" generates many of switches from contact with the operation to a handler.

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[0005]In recent years, the case of a switch where it is used as a means for conveying a purchaser's purchase intention in an auction system is increasing. For example, it is connected to the console for exclusive use assigned to auction people and this console, and this auction system consists of a display for indication etc. with which the selling price etc. of the tender machine assigned to each purchaser and an auction article are displayed.

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**MEANS**

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## OPERATION

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[0013]At this time, the sound which transmits and leaks air by sticking a sound hood with a switch can be suppressed, and a higher soundproof effect is acquired. If this fitting part is formed using an elastic member and a sound hood is attached to a switch with that elasticity, it will become possible to repeat attachment and detachment of a sound hood, and will become easy [ also sticking a sound hood on a switch ].

[0014]

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**EXAMPLE**

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[Example]Hereafter, the example by this invention is described in detail, referring to drawings. Drawing 1 is a figure showing the crime prevention covering 100 by this example. Drawing 2 is an outline view showing the tender machine 200 of the auction system by which this sound hood 100 is applied.

[0015]In drawing 2, the figure (a) shows the top view of the tender machine 200, and the figure (b) shows respectively the side view from the row direction of the figure (a). With reference to this drawing 2, first, you make it connected with the auction business in the auction system by which this tender machine 200 is used, and the composition of the tender machine 200 with which this example is applied, and its operation are explained.

[0016]Especially this tender machine 200 is a thing of the cable type which direct continuation is carried out to the console only for auction people which is not illustrated, and is attached under a desk etc. and which is, uses the attachments lug 302 and 303 for the boards 301, such as a desk, and is attached.

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## DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1]It is a figure showing the sound hood by this example.

[Drawing 2]It is an outline view of the tender machine with which this example is applied.

[Drawing 3]It is a figure showing the state where the switch was made to equip with this example.

[Description of Notations]

100 Sound hood

101 and 102 Crevice

103 Level difference

104 Covering section

105 Fitting part

204 Button switch

205 Button

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[Translation done.]

## \* NOTICES \*

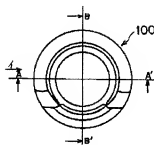
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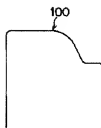
## DRAWINGS

[Drawing 1]

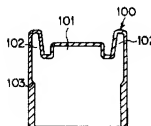
本実施例による防音カバーを示す図



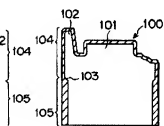
(a) 平面図



(b) 側面図



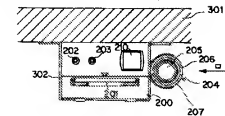
(c) A-A'線断面図



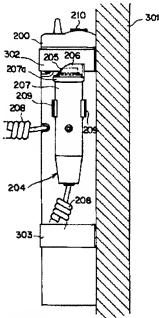
(d) B-B'線断面図

[Drawing 2]

本実施例に適用される応孔器の外観図



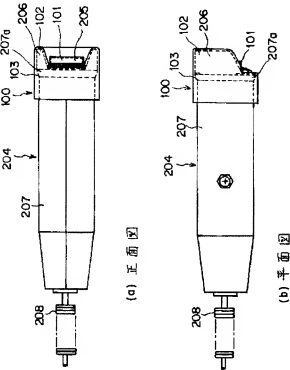
(a) 平面図



(b) 側面図

[Drawing 3]

本実施例もスイッチに装着させた状態を示す図



[Translation done.]